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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/703,174	10/31/2000	Charu C. Aggarwal	YOR920000430US1	7445

7590	09/23/2004	

William E Lewis
Ryan Mason & Lewis LLP
90 Forest Avenue
Locust Valley, NY 11560

EXAMINER
HILLERY, NATHAN

ART UNIT	PAPER NUMBER
2176	

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/703,174	AGGARWAL ET AL.
	Examiner	Art Unit	
	Nathan Hillery	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _06 May 2004_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-27_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-27_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _06 May 2004_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to communications: Amendment filed on 5/6/04.

2.   Claims 1 – 27 are pending in the case. Claims 1, 10, and 19 are independent.

3.   The objection to the Specification has been withdrawn as necessitated by

amendment.

4.   The rejection of claims 5, 14, and 23 under 35 U.S.C. 112, second paragraph as

being indefinite has been withdrawn as necessitated by amendment.

5.   The rejection of claims 1 – 27 under 35 U.S.C. 103(a) as being unpatentable has

been withdrawn as necessitated by amendment.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 1 – 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bharat et al. (US006112203A).

8.   **Regarding independent claim 1**, Bharat et al. teach that the set of documents

can be produced by combining the set of results from a Web search engine in response

to a user query (which we call the `start-set`) ...Terms of the query imply a topic of

interest on which the user requested the search to be made. The nodes in the start set

are first scored according to their connectivity, and the number of terms of the query

that appear as unique sub-strings in the URL of the represented documents ... During a

content analysis phase, a relevance weight is assigned to a carefully chosen subset of the nodes in the graph ... The relevance weights are based on the similarity of each represented document to the distilled topic as determined above. The relevance weight of a document is further increased when the document includes words that are terms of the query (Column 3, lines 3 – 27), which provide for **retrieving one or more documents from the information network that satisfy a user-defined predicate and collecting statistical information about the one or more retrieved documents as the one or more retrieved documents are analyzed**. Bharat et al. do not explicitly teach **using the collected statistical information** ... However, it would have been obvious to one of ordinary skill in the art at the time of the invention to **use the collected statistical information to automatically determine further document retrieval operations**, based on Bharat et al. teaching that we *"prune" the graph so that only pages that specifically relate to the topic implied by the query are represented in the graph. Finally, the connectivity of the pruned graph is scored to determine the ranking of the pages in the result set. Only pages whose content and connectivity ranking exceeds a predetermined threshold are returned to the user* (Column 4, lines 38 – 44). The skilled artisan would be motivated to **use the collected statistical information** based on this teaching because *the invention relates generally to computerized information retrieval and more particularly to ranking retrieved documents based on content* (Column 1, lines 7 – 9) and because *a good ranking process will return "useful" pages* (Column 4, lines 20 – 21).

9.   **Regarding dependent claim 2**, Bharat et al. teach that *in response to a query composed by a user, the search engine returns a result set which satisfies the terms (key words) of the query* (Column 4, lines 11 – 14), which provides that **the user-defined predicate specifies content associated with a document**.

10.   **Regarding dependent claims 3 and 4**, Bharat et al. teach that *during a content analysis phase, a relevance weight is assigned to a carefully chosen subset of the nodes in the graph. The relevance weights are based on the similarity of each represented document to the distilled topic as determined above. The relevance weight of a document is further increased when the document includes words that are terms of the query* (Column 3, lines 21 – 27), which provide that **the statistical information collection step uses content of the one or more retrieved documents** and that **the statistical information collection step considers whether the user-defined predicate has been satisfied by the one or more retrieved documents**.

11.   **Regarding dependent claims 5 and 6**, Bharat et al. teach that *in step 260, we assign a similarity weight to each node 213 of the sub-graph 255. Various document similarity measuring techniques have been developed in Information Retrieval to determine the goodness of fit between a "target" document and a collection of documents. These techniques typically measure a similarity score based on word frequencies in the collection and a target document* (Column 6, lines 51 – 57), which provide that **the collected statistical information is used to direct further document retrieval operations toward documents which are similar to the one or more retrieved documents that also satisfy the predicate**, and that **the collected**

statistical information is used to direct further document retrieval operations toward documents which are more likely to satisfy the predicate than would otherwise occur with respect to document retrieval operations that are not directed using the collected statistical information.

12.   **Regarding dependent claim 7**, Bharat et al. teach that *in one prior art technique, an algorithm for connectivity analysis of a neighborhood graph (n-graph) is described by Kleinberg ...The algorithm analyzes the link structure, or connectivity of Web pages "in the vicinity" of the result set to suggest useful pages in the context of the search that was performed* (Column 1, lines 55 – 64), which provide the capability that **the collected statistical information is used to direct further document retrieval operations toward documents which are linked to by other documents which also satisfy the predicate.**

13.   **Regarding dependent claim 8**, Bharat et al. teach that *FIG. 1 shows a distributed network of computers 100 that can use our invention. Client computers 110 and server computers 120 (hosts) are connected to each other by a network 130, for example, the Internet. The network 130 includes an application level interface called the World Wide Web (the "Web")* (Column 3, lines 59 – 64) and that *although the invention is described with respect to documents that are Web pages, it should be understood that the invention can also be worked with any linked data objects of a database whose content and connectivity can be characterized* (Column 4, lines 4 – 8), which provide for **the information network is the World Wide Web and a document is a web page.**

14.   **Regarding dependent claim 9**, Bharat et al. teach that *in our present invention, we use only a subset of the pages for the purpose of content analysis. The subset of influential pages is selected by a heuristic that is based on the URLs of the pages in the start set 201 and their connectivity. This information can be determined from the graph 211 without having to fetch the pages themselves. The heuristic selects nodes based on "in-degree," i.e., the number of edges 213 pointing at a node, "out-degree" (out-going edges) and comparison of the key words in the query with unique sub-strings of the URL* (Column 5, lines 47 - 56), which provides that **the statistical information collection step uses one or more uniform resource locator tokens in the one or more retrieved web pages**.

15.   **Regarding independent claim 10**, the claim incorporates substantially similar subject matter as claim 1, and is rejected along the same rationale.

16.   **Regarding dependent claim 11**, the claim incorporates substantially similar subject matter as claim 2, and is rejected along the same rationale.

17.   **Regarding dependent claim 12**, the claim incorporates substantially similar subject matter as claim 3, and is rejected along the same rationale.

18.   **Regarding dependent claim 13**, the claim incorporates substantially similar subject matter as claim 4, and is rejected along the same rationale.

19.   **Regarding dependent claims 14 and 15**, the claims incorporate substantially similar subject matter as claim 6, and are rejected along the same rationale.

20.   **Regarding dependent claim 16**, the claim incorporates substantially similar subject matter as claim 7, and is rejected along the same rationale.

21.   **Regarding dependent claim 17**, the claim incorporates substantially similar subject matter as claim 8, and is rejected along the same rationale.

22.   **Regarding dependent claim 18**, the claim incorporates substantially similar subject matter as claim 9, and is rejected along the same rationale.

23.   **Regarding independent claim 19**, the claim incorporates substantially similar subject matter as claim 1, and is rejected along the same rationale.

24.   **Regarding dependent claim 20**, the claim incorporates substantially similar subject matter as claim 2, and is rejected along the same rationale.

25.   **Regarding dependent claim 21**, the claim incorporates substantially similar subject matter as claim 3, and is rejected along the same rationale.

26.   **Regarding dependent claim 22**, the claim incorporates substantially similar subject matter as claim 4, and is rejected along the same rationale.

27.   **Regarding dependent claims 23 and 24**, the claims incorporate substantially similar subject matter as claim 6, and are rejected along the same rationale.

28.   **Regarding dependent claim 25**, the claim incorporates substantially similar subject matter as claim 7, and is rejected along the same rationale.

29.   **Regarding dependent claim 26**, the claim incorporates substantially similar subject matter as claim 8, and is rejected along the same rationale.

30.   **Regarding dependent claim 27**, the claim incorporates substantially similar subject matter as claim 9, and is rejected along the same rationale.

Response to Arguments

31.   Applicant's arguments filed 5/6/04 have been fully considered but they are not

persuasive.

32.   In response to applicant's argument that the references fail to show certain

features of applicant's invention, it is noted that the features upon which applicant relies

(i.e., an intelligent crawling technique that is able to further focus its search

appropriately) are not recited in the rejected claim(s). Although the claims are

interpreted in light of the specification, limitations from the specification are not read into

the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

33.   In response to applicant's argument that Bharat does not disclose an intelligent

crawling technique, a recitation of the intended use of the claimed invention must result

in a structural difference between the claimed invention and the prior art in order to

patentably distinguish the claimed invention from the prior art. If the prior art structure is

capable of performing the intended use, then it meets the claim. In a claim drawn to a

process of making, the intended use must result in a manipulative difference as

compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re

Otto*, 136 USPQ 458, 459 (CCPA 1963).

34.   In response to Applicant's argument that Bharat does not disclose "using the

collected statistical information to automatically determine further document retrieval

operations" (page 9, fourth paragraph), it is noted that the Applicant may have intended

a different meaning than the broad interpretation relied upon in the rejection; however,

the broad interpretation used is still within the scope of the claimed invention even when

read in light of the specification. Further, the invention of Bharat et al. provides for user

interaction and thus the Office interpreted the disclosure of Bharat et al. from the user's

point of view, i.e. the user's retrieval of certain documents, which are the documents

returned to the user by the system (*result set*).

Conclusion

35.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Nathan Hillery whose telephone number is (703) 305-

4502. The examiner can normally be reached on M - F, 6:30 a.m. - 3:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Joseph H. Feild can be reached on (703) 305-9792. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

JOSEPH FEILD
SUPERVISORY PATENT EXAMINER

NH